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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,408	04/07/2005	Wolfgang Moehl	3047	3983

7590
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01/24/2007

EXAMINER

SELLMAN, CACHET I

ART UNIT

PAPER NUMBER

1762

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/502,408	Applicant(s) MOEHL ET AL.	
	Examiner Cachet I. Sellman	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-12 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/23/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 1 is indefinite because the applicant fails to define x and y of claim 1. The subscripts x and y can encompass numerous values and it is therefore unclear to the examiner as to what the applicant is trying to claim.

Claim Objections

3. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 3 claims that the layer system has a thickness of less than 1200 nm, preferably less than 500 nm. Since the applicant states "preferably less than 500 nm" this limitation is not required in the claim. Claim 1 requires that the thickness of the layer system is less than 1200 nm therefore claim 3 does not further limit claim 1.
4. It should also be noted that in claim 4, the applicant states "a layer system composed preferably of fifty alternating individual layers..." because the applicant

stating preferably this limitation is not required in the claim. The examiner would suggest rewriting the claim to state "The method as recited in Claim 2, via which a layer system composed of fifty alternating individual layers of TiO_2 and SiO_2 with layer thicknesses of between 5nm and 100nm is applied."

Allowable Subject Matter

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Minaev (RU 2024988 C1) teaches coating the inside of a burner made of gas melted quartz glass of a metal halogen lamp with a layer of silicon oxide in order to prevent contact between the burner and a filter. Austin (US 5147125) teaches coating a multilayer film on a transparent substrate to reject UV radiation using a UV reflector formed of alternating high and low refractive index UV dielectric material such as titanium oxide and silicon dioxide (col. 2, lines 55-61). Urataki et al. (JP 406062250A) teaches providing a UV-ray reflection film to reflect UV ray and to transmit visible light on the outer surface of a tube to improve lamp efficiency and prevent damage to man. The film comprises titanium and silicon oxide in alternating layers (abstract). Chang (US 5270615) teaches providing a multilayer oxide coating on a high intensity metal halide discharge lamp on the tube to protect from devitrification, cracking and etching (abstract, col. 2, lines 7-30). Van der Wal et al. (US 4099840) teaches a multilayer reflector which comprises high refractive and low refractive index material vapor deposited where the substrate is glass and the coatings are titanium oxide and silicon oxide (abstract and col. 2, lines 49-65). Etzkorn et al. (US 5154943) teaches applying silicon oxide and titanium oxide coatings to a dome-like shaped substrate using plasma-CVD process

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(abstract and example 1). Pcelin et al (DE 003819878 A1) teaches the coating of the inside of the bulb of a gas discharge lamp which comprises a high-pressure gas discharge burner with a reflecting layer (abstract). Walther et al. (Multilayer barrier coating system produced by plasma-impulse chemical vapor deposition) teaches applying titanium oxide and silicon oxide coating to plastic substrates using plasma impulse chemical vapor deposition.

5. Claims 1-12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

6. The following is a statement of reasons for the indication of allowable subject matter: As shown in paragraph 4 above, The prior art teaches coating plastic, glass, the bulb of a HID lamp with a UV reflecting coating made of silicon oxide and titanium oxide using plasma impulse chemical vapor deposition. The prior art also teaches coating the inside of the burner of a lamp with silicon oxide in order to substrate prevent contact between the burner and a filter. However, the prior art fails to disclose or reasonable suggest the coating of a quartz burner of a HID lamp with a UV-reflecting layer system made of titanium and silicon oxide using PICVD.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cachet I. Sellman whose telephone number is 571-272-0691. The examiner can normally be reached on Monday through Friday, 7:00 - 4:30pm.

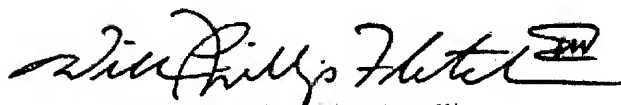
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cachet I Sellman
Examiner
Art Unit 1762

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A handwritten signature in black ink, appearing to read "William Phillip Fletcher III", with a stylized flourish at the end.

William Phillip Fletcher III
Primary Examiner
Art Unit 1762